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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,470	11/28/2001	David Canard	FR 000127	2289

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER

NGUYEN, HAI L

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,470

Applicant(s)

CANARD ET AL.

Examiner

Hai L. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-7 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 10 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment received on 11/10/04 has been reviewed and considered with the following results:

As to the objection to the drawings, Applicant's revision of the drawings has overcome the objection, as such; the objection has been withdrawn.

As to the prior art rejections to the claims, Applicant's arguments with respect to the prior art rejections are persuasive and, as such, the prior art rejections have been withdrawn. A new action on the merits appears below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison (US 6,470,060; previously cited) in view of Momtaz (US 6,389,092).

With regard to claims 1 and 7, Harrison discloses in Fig. 1 a device, and a method of use thereof, for comparison, including a phase/frequency comparator (11, 12, 26), which is designed to receive a first input signal (CLK1) and second input signal (CLK1), and emit a control signal; at least two current sources (38, 46); and a capacitive element (48), which is designed to have the charge current pass through it, and to generate the control signal (VOUT); where the

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phase/frequency comparator is designed such that the first regulation signal comprises a succession of pulses, each of which has a width which is modulated according to the frequency difference which exists between the first and second input signals. Fig. 1 of Harrison shows a device meeting all of the claimed limitations of the claims except for a low-pass filter (LPF in instant Fig. 2). Momtaz teaches in Fig. 8 a similar device including a low-pass filter (132, 134) responsive to the regulation of a phase/frequency comparator as recited in the claim. Therefore, it would have been obvious to one of ordinary skill in the art to implement the low-pass filter taught by Momtaz with the prior art (Fig. 1 of Harrison) in order to remove high frequency components such as unwanted noise.

With regard to claim 2, the references also meet the recited limitation in the claim (see Fig. 1 of Harrison).

Claim 4 is rejected for similar motivation; note the above discussion with regard to claims 1 and 7. Furthermore, the limitation "an oscillator" is also met by the references, the inherent oscillator (not shown) is similar to the oscillator 320 (see Fig. 6 of Harrison).

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison in view of Momtaz, as applied to claim 4 above, and further in view of Ninomiya (US 6,512,801; previously cited).

With regard to claim 5, the above-discussed circuit of the prior arts meets all of the claimed limitations except for a programmable divider (DIV in instant Fig. 1 of present application). Ninomiya teaches in Fig. 1 a circuit comprising a programmable divider (21), which is inserted between the oscillator (11) and the device (23, 25) for comparison as recited in claim 5. Therefore, it would have been obvious to one of ordinary skill in the art to implement

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the programmable divider taught by Ninomiya with the prior art (Fig. 2 of Quigley et al.) in order to set a dividing ratio with which the oscillator (22) can generate the output signal (VLO) with any frequency, within the range of the circuit, to meet the specific frequency of the particular application.

With regard to claim 6, the above discussed the device of the prior arts meets all of the claimed limitations of the frequency synthesizer except for the mixer (MX in instant Fig. 1 of present application). Ninomiya teaches in Fig. 1 a device comprising a mixer (8), which is designed to receive the output signals of the input stage and of the frequency synthesizer (f_s , f_v), and to emit a signal with a frequency which is equal to a difference between the radio frequency and the oscillation frequency. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to utilize that teaching of Ninomiya by implementing the mixer with the frequency synthesizer of the prior arts in order to provide a better device for reception of radio signal, since it can get optimum benefit from that frequency synthesizer.

Allowable Subject Matter

5. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose or fairly suggest a device for comparison (as shown in Fig. 2) having specific structural limitations, as recited in claim 3, such as the phase/frequency comparator (PD) includes a first (L1) and a second detector (L2) for active

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edges of the first (Vdiv) and second (Vref) input signals respectively, the outputs of which are connected to the inputs for setting to one and to zero of flip-flop RS (RSL); and means (RAZ) for re-initialization of the first and second detectors, which are designed to deactivate one or the other of the detectors, when the active edge which it has detected has been taken into account by the flip-flop RS; and being configured in combination with the rest of the limitations of the base claim and any intervening claims.

Conclusion

6. In view of the new grounds of rejection, this action is non-final.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The official fax phone number for the organization where this application or proceeding is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

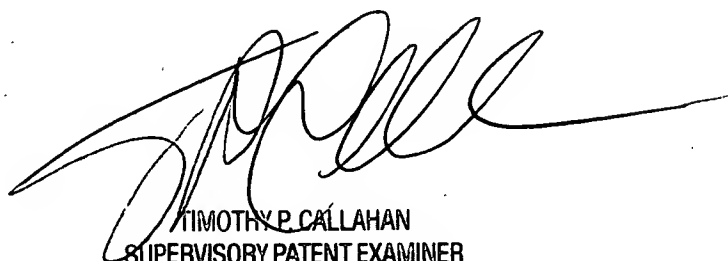
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN

December 10, 2004



TIMOTHY P. CALLAHAN
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